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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,495	10/16/2003	Daisuke Kitazawa	244077US90	5366

22850 7590 05/12/2009

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EXAMINER	
MURPHY, RHONDA L	

ART UNIT	PAPER NUMBER
2416	

NOTIFICATION DATE	DELIVERY MODE
05/12/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/685,495	KITAZAWA ET AL.	
	Examiner	Art Unit	
	RHONDA MURPHY	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8,10,12-20,22,24 and 26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8,10,12-20,22,24 and 26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *16 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. This communication is responsive to the request for reconsideration filed on 3/23/09. Accordingly, claims 9, 11, 21, 23 and 25 have been previously canceled and claims 1-8, 10, 12-20, 22, 24 and 26 are currently pending in this application.

Response to Arguments

1. Applicant's arguments filed 3/23/09 have been fully considered but they are not persuasive. Applicants' argue Immonen does not disclose "classifying packets into a quantitative guarantee type packet having a request value that indicates quantitative value for communication quality or a relative guarantee type packet not having the request value that indicates quantitative value for communication quality" and "controlling a transmission order of the packets for every classified quantitative guarantee type packet in the quantitative guarantee type buffer and every classified relative guarantee type packet in the relative guarantee type buffer." However, Examiner respectfully disagrees. Immonen teaches classifying a quantitative guarantee type packet having a request value that indicates quantitative value for communication quality (*col. 8, lines 47-66; further described in col. 13, lines 9-14*) or a relative guarantee type packet not having the request value that indicates quantitative value for communication quality (*col. 9, lines 17-27 and col. 8, lines 35-43; QoS attributes are not indicated by user equipment; further described in col. 13, lines 15-18*). Immonen further teaches control a transmission order of the packets for every classified quantitative

guarantee type packet in the quantitative guarantee type buffer (*col. 8, lines 30-61; further described in col. 12, lines 54-56: prioritize certain IP flows*) and every classified relative guarantee type packet in the relative guarantee type buffer (*col. 8, lines 30-61; further described in col. 12, lines 54-56: prioritize certain IP flows*). The a quantitative guarantee type buffer configured to store the quantitative guarantee type packet is located within SGSN 12 (col. 9, lines 6-10); and a relative guarantee type buffer configured to store the relative guarantee type packet is located within SGSN 12 (col. 9, lines 6-10).

2. Applicant further states "Immonen et al. disclose the relative guarantee type packet not having a quantitative value for communication quality. However, these portions of Immonen et al. merely disclose that the SGSN of the cellular network provides default QoS profiles for equipment that otherwise does not provide a QoS value. That is, the SGSN of Immonen et al. actually ensures that all packets communicated by the Immonen et al. system have a QoS value. Thus, Immonen et al. discloses providing communication transmission based only on QoS classes, which provides a quantitative value for communication quality for all packets." Examiner acknowledges Applicants' argument. However, the claim limitation recites "a relative guarantee type packet not having the request value that indicates quantitative value for communication quality", which is taught by Immonen in col. 9, lines 17-27: "*the user equipment 11 can but does not have to request a desired QoS profile for the requested transmission. After a transmission request has been received by the SGSN 12, it is first determined in the SGSN 12, whether the request by the user equipment 11 contains a*

request for a specific QoS profile. In case no specific QoS profile is requested by the user equipment 11, it is checked from the configuration in the SGSN 12 which values of attributes are to be used as default profile for the requested connection." Therefore, the relative guarantee type packet does not initially have a request value that indicates quantitative value for communication quality. Furthermore, Examiner would like to note the specification discloses in paragraph 13, a relative guarantee type packet as "not requested any ***predetermined* QoS** or any specific request values" and further in paragraph 43, "*Moreover, the packet classification unit 14a classifies a packet with a destination, which is a relative guarantee type mobile station that has not requested any request values for communication quality* ***but has transmitted QoS class information such as DSCP into a relative guarantee type packet****, and stores it in transmission buffer No. n+1 through No. N for storing relative guarantee type packets,* ***and for a corresponding QoS class***." Thus, Applicants' specification and Immonen both describe the relative guarantee type packet as not initially having a predetermined request value and it is Examiner's position that the claim limitations have been met and the rejection has been maintained.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1 – 4, 6 – 8, 10, 12 – 20, 22, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Immonen et al. (US 7,010,305) in view of Hodgkinson et al. (US 7,209,437).

Regarding claims 1, 14 and 15, Immonen teaches a radio communication system (*Fig. 1*) comprising: a plurality of mobile stations (*UE 11; only one illustrated, however plurality of mobiles exist in the communication system, col. 13, lines 43-45*); and a base station (*SGSN 12 and HLR 13*) comprising: a packet classification unit (*Fig. 4, PAC 34*) configured to classify packets (*col. 13, lines 9-25*) received/transmitted from/to a plurality of mobile stations into a quantitative guarantee type packet having a request value that indicates quantitative value for communication quality (*col. 8, lines 47-66; further described in col. 13, lines 9-14*) or a relative guarantee type packet not having the request value that indicates quantitative value for communication quality (*col. 9, lines 17-27 and col. 8, lines 35-43; QoS attributes are not indicated by user equipment; further described in col. 13, lines 15-18*), a quantitative guarantee type buffer configured

to store the quantitative guarantee type packet (located within SGSN 12; col. 9, lines 6-10); a relative guarantee type buffer configured to store the relative guarantee type packet (located within SGSN 12; col. 9, lines 6-10); a transmission order controller (QoS *profile 14 and service profile 15; col. 8, lines 33-34, 54-57*) configured to control a transmission order of the packets for every classified quantitative guarantee type packet in the quantitative guarantee type buffer (*col. 8, lines 30-61; further described in col. 12, lines 54-56: prioritize certain IP flows*) and every classified relative guarantee type packet in the relative guarantee type buffer (*col. 8, lines 30-61; further described in col. 12, lines 54-56: prioritize certain IP flows*); and a radio resource assignment unit (located within SGSN 12) configured to assign radio resources to the quantitative guarantee type packet in the quantitative guarantee type buffer and the relative guarantee type packet in the relative guarantee type buffer, according to the transmission order controlled by the transmission order controller (col. 8, lines 30-40, 54-58; further described in col. 9, lines 33-47).

Although Immonen teaches assigning radio resources to the quantitative guarantee type packet and the relative guarantee type packet, Immonen fails to explicitly teach wherein if radio resources still remain after assignment to the quantitative guarantee type packet in the quantitative guarantee type buffer, the radio resource assignment unit assigns remaining radio resources to the relative guarantee type packet in the relative guarantee type buffer.

However, Hodgkinson teaches if radio resources still remain after assignment to the quantitative guarantee type packet in the quantitative guarantee type buffer, the

radio resource assignment unit assigns remaining radio resources to the relative guarantee type packet in the relative guarantee type buffer (col. 3, line 59 to col. 4, line 4).

Thus, it would have been obvious to one skilled in the art to assign remaining resources to the to the relative guarantee type packet, since the relative guarantee type packet is of a lower priority than the quantitative guarantee type packet and therefore, would utilize resources after higher priority packets.

Regarding claim 2, Immonen teaches the base station of claim 1, wherein the transmission order controller gives priority to the quantitative guarantee type packet over the relative guarantee type packet, in the transmission order (col. 10, lines 30-40, further described in col. 12, line 50 to col. 13, line 27).

Regarding claim 3, Immonen teaches the base station of claim 1, wherein the transmission order controller controls the transmission order based on a quality of service class (col. 13, lines 9-12).

Regarding claim 4, Immonen teaches the base station of claim 1, wherein the transmission order controller controls the transmission order based on radio quality between the base station and the plurality of mobile stations (col. 8, lines 30-40, 54-58).

Regarding claim 6, Immonen teaches the base station of claim 1, further comprising: a measurement unit (located within SGSN 12) configured to measure communication quality for the request value (col. 9, lines 53-62), wherein the transmission order controller compares the request value with a measured value by the measurement unit, and controls the transmission order based on a comparison result (col. 9, lines 53-62).

Regarding claim 7, Immonen teaches the base station of claim 1, further comprising: a measurement unit (located within SGSN 12) configured to measure communication quality for the request value (col. 9, lines 53-62), wherein the packet classification unit restrains storing the quantitative guarantee type packet in a transmission buffer for storing the packets, when a measured value by the measurement unit is more than the request value (col. 13, lines 58 to col. 14, line 3).

Regarding claim 8, Immonen teaches the base station of claim 1, wherein the transmission order controller controls the transmission order such that a number of the quantitative guarantee type packets transmitted in unit time becomes equal to a number of packets satisfying the request value (col. 12, lines 50-66).

Regarding claim 10, Immonen teaches the base station of claim 1, wherein the radio resource assignment unit assigns the radio resources to the quantitative guarantee type packet based on the request value (col. 8, lines 30-40, 54-58).

Regarding claim 12, Immonen teaches the base station of claim 1, further comprising: a request value attached to a packet arrived from a core network, based on a quality of service class for the packet in the core network (col. 12, line 61 to col. 13, line 27), wherein the packet classification unit classifies a packet having the request value attached thereto into the quantitative guarantee type packet (col. 13, lines 9-14), and classifies a packet not having a request value attached thereto into the relative guarantee type packet (col. 13, lines 15-18).

Immonen fails to explicitly disclose an attaching unit to attach the request value.

However, Immonen does disclose a packet with an attached request value arrived from a core network.

In view of this, it would have been obvious to one skilled in the art to include an attaching unit for attaching the request value, in order to affix a particular request value to the packet.

Regarding claim 13, Immonen teaches the base station of claim 1, further comprising: a determination unit (located within SGSN 12) configured to determine a quality of service class in a core network for a packet (col. 8, lines 30-46), which has been received from a mobile station and is to be transmitted to the core network, based on whether the packet is the quantitative guarantee type packet or the relative guarantee type packet (col. 8, lines 35-66).

Regarding claims 16, 18 and 20, Immonen teaches the base station of claim 1, wherein the packet classification unit classifies the packet into a quantitative guarantee type packet having a request value for communication quality that is not a QoS class (col. 8, lines 51-58).

Regarding claims 17 and 19, Immonen teaches the base station of claim 16, wherein the packet classification unit classifies the packets into a quantitative guarantee type packet having a request value for at least one of a specific quantity of at least one of a transfer speed, a transfer delay or jitter (col. 8, lines 51-58).

Regarding claims 22, 24 and 26, the combined teachings of Immonen and Hodgkinson describe the base station and method of claims 1, 14 and 15, wherein Hodgkinson further teaches if radio resources still remain after assignment to the

relative guarantee type packets, the radio resource unit assigns the further remaining radio resources to the quantitative guarantee type packet further remaining in the quantitative guarantee type buffer (col. 3, line 59 to col. 4, line 4).

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Immonen et al. (US 7,010,305) as applied to claim 1 and further in view of Rinne (US 2005/0185651 A1).

Regarding claim 5, Immonen teaches the base station of claim 1, wherein the transmission order controller controls a transmission order of a plurality of quantitative guarantee type packets.

Immonen fails to explicitly disclose wherein the transmission order controller controls a transmission order of a plurality of quantitative guarantee type packets having same request value, such that communication quality for the request value becomes same, among a plurality of mobile stations receiving/transmitting the quantitative guarantee type packets

However, Rinne teaches wherein the transmission order controller controls a transmission order of a plurality of quantitative guarantee type packets having same request value, such that communication quality for the request value becomes same, among a plurality of mobile stations receiving/transmitting the quantitative guarantee type packets (page 6, paragraph 85).

Thus, it would have been obvious to one skilled in the art to modify Immonen's system by controlling the transmission order of the quantitative guarantee type packets

having same request value, as taught by Rinne, for the purpose of scheduling packets with the same transmission requirements.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to RHONDA MURPHY whose telephone number is (571)272-3185. The examiner can normally be reached on Monday - Friday 9:00 - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Rhonda Murphy
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